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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,530	11/28/2003	Marco Zanoletti	2511-1032	7596

466 7590 09/28/2004

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EXAMINER

KERNS, KEVIN P

ART UNIT PAPER NUMBER

1725

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,530

Applicant(s)

ZANOLETTI, MARCO

Examiner

Kevin P. Kerns

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 1,2,4,5,7-9 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/28/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Note: In this instance, the abstract recites the legal term "comprises" on two occasions.

2. The abstract of the disclosure is objected to because "rised" should be changed to "raised" in the 2nd line from the end of the abstract. Correction is required. See MPEP § 608.01(b).
3. The disclosure is objected to because of the following informalities: on page 3, 11th line, "member" should be changed to "members". On page 3, 12th line, "presses" should be changed to "press". On page 4, 8th line, it is believed that "salified" should be changed to "solidified". On page 4, 9th line, it is believed that the term "foles" should be changed to "holes". On page 6, 17th line, "aligne" should be changed to "align". On page 11, 9th line, "member" should be changed to "members". On page 11, 13th line,

"12" should be changed to "2". On page 13, 9th line "(see Fig. 11)" should be added prior to "parallelly" for further clarity. On page 13, 22nd line, "prue" should be changed to "sprue". On page 14, 10th line, "cilinders" should be changed to "cylinders". On page 15, 7th line, "33" should be changed to "34" after "member". On page 15, 12th line, "completition" should be changed to "completion". On page 17, 14th line, "jeopardise" should be changed to "jeopardize". On page 25, Table II, the division symbols under the heading "Number of die cavities" should be changed to hyphens. Corrections and/or clarifications are required for these and other errors that occur throughout the specification.

Claim Objections

4. Claims 1, 2, 4, 5, 7-9, and 11 are objected to because of the following informalities: in claim 1, 1st and 2nd lines, the awkward and unclear phrase "for the die cast electric rotors, in vertical press, the apparatus" should be revised for clarity.

In claim 2, 2nd line, "a sleeve" should be changed to "an injection sleeve" so that proper antecedent basis would occur for claims that are dependent on claim 2. In claim 2, 9th line, a comma should be added after "respectively".

In claim 4, 3rd line, "in" should be changed to "with" before "respect". In claim 4, 6th line, commas should be added before and after "respectively". In claim 4, 2nd line from the end of the claim, "same" should be deleted before "housing", and "in" should be changed to "with" before "respect".

In claim 5, 2nd line, it is believed that the term "comprise" should be changed to "comprises", as the "thrust means" is believed to be singular.

In claim 7, 2nd line, "of" should be added after "removal". In claim 7, 3rd and 5th lines, "actuator" should be changed to "actuators". In claim 7, 4th line, "operate" should be changed to "operating".

In claim 8, 6th line, "member" should be changed to "members" after "gripping". In claim 8, 2nd line from the end of the claim, it is believed that the term "relative" should be deleted, and that "supporting" should be changed to "rotary" (to obtain proper antecedent basis with the limitation "rotary table").

In claim 9, 4th line, "the" should be added before "rotor".

In claim 11, 3rd line, "in" should be changed to "with" before "respect".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thieman et al. (US 5,660,223) in view of Wunder (US 3,866,666).

Thieman et al. disclose a vertical die casting press with indexing shot sleeves, in which the die casting press 10 includes a vertical frame 12 that supports a rotary indexing table 58 that supports a plurality of shot sleeves 60 (injection units that include a shot piston/plunger 78 cooled by cooling fluid/water through internal passages 88) driven by a hydraulic shot cylinder 95; a metal receiving/pouring station 70 and a metal ejecting or transfer station 72; a bottom die member (bottom mold section 51) aligned with an upper die member (top mold section 45), such that the shot cylinder 95 is operable to clamp a stack 48 of metal laminations of a rotor P (aligned/locked by a housing bush in the form of gate plate 52) to be formed on a continuous basis (via electronic control unit in the form of cycle initiating start switches 175) upon injection with a molten metal in the die assembly, which forms connected sprues or biscuits upon partial solidification of the molten metal; and a smaller hydraulic ejection cylinder 110 to grippingly actuate and eject the solidified biscuits (abstract; column 1, lines 48-67; column 2, lines 1-17 and 36-67; column 3, lines 1-67; column 4, lines 1-67; column 5, lines 1-20; and Figures 1-4). Thieman et al. do not disclose the use of a second rotary table that supports a plurality of bottom die members.

However, Wunder discloses a vertical die casting apparatus for automatically casting rotors, in which the apparatus includes an automated rotary table 42 for supporting a plurality of die members (molds 44 that include upper die section 54 and lower die section 56) that are indexed to a single injection station, such that a rotor assembly 20 that includes a plurality of laminations 22 assembled between end rings (24,26) and conductor bars 28 is filled with molten metal and indexed around the rotary

table 42; stations A-D on the rotary table, such that station A is the loading station, station B is the clamping and casting station that includes injection apparatus 70 with a plunger 88 mounted for movement with a shot sleeve 78, station C is the work station where the sprue S is removed and cast part released from the upper die section 54, and station D is the ejection station where completed cast rotor 20 is ejected via ejection mechanism 120,122; and a programmed operation of the clamping, casting, and removal operations in a timed sequence, such that the rotary table that supports a plurality of bottom die members is advantageous for obtaining a variety of die casting and removal operations simultaneously, thus obtaining high production rates (abstract; column 1, lines 6-68; column 2, lines 1-4 and 55-68; column 3, line 1 through column 8, line 18; and Figures 1-11).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the vertical die casting press with indexing shot sleeves (plurality of injection units arranged on a rotary indexing table), as disclosed by Thieman et al., by adding another overlapping rotary table that supports a plurality of bottom die members, as taught by Wunder, in order to obtain the further advantages of performing a variety of die casting and removal operations simultaneously, thus obtaining high production rates (Wunder; abstract; column 1, lines 21-60; column 7, lines 58-68; and column 8, lines 1-18).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Beastrom, Ueno et al., Ishihara et al., Bennet, and Oonita references are also cited in PTO-892.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin P. Kerns *Kevin Kerns* 9/27/04
Examiner
Art Unit 1725

KPK
kpk
September 27, 2004